

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:**

**Region:** Raleigh Regional Office  
**County:** Wake  
**NC Facility ID:** 9200830  
**Inspector's Name:** Stanley Williams  
**Date of Last Inspection:** 10/31/2017  
**Compliance Code:** 3 / Compliance - inspection

<b>Facility Data</b>  <b>Applicant (Facility's Name):</b> INGENCO Renewable Development, LLC - Apex  <b>Facility Address:</b> INGENCO Renewable Development, LLC - Apex 6512 Old Smithfield Road Apex, NC 27502  <b>SIC:</b> 4931 / Elec & Other Services Combined <b>NAICS:</b> 221112 / Fossil Fuel Electric Power Generation  <b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V			<b>Permit Applicability (this application only)</b>  <b>SIP:</b> 02D .0516, 02D .0521, 02D .1111, 02Q .0317 <b>NSPS:</b> N/A <b>NESHAP:</b> MACT ZZZZ <b>PSD:</b> N/A <b>PSD Avoidance:</b> Yes <b>NC Toxics:</b> N/A <b>112(r):</b> N/A <b>Other:</b> SB3 limits.				
<b>Contact Data</b>			<b>Application Data</b>				
<b>Facility Contact</b>  Matthew Weeks Associate, Environmental Professional (804) 350-7649 2250 Dabney Road Richmond, VA 23230	<b>Authorized Contact</b>  Brad Burmaster Senior Vice President (281) 378-1190 811 Main Street, Suite 3500 Houston, TX 77002	<b>Technical Contact</b>  Matthew Weeks Associate, Environmental Professional (804) 350-7649 2250 Dabney Road Richmond, VA 23230	<b>Application Number:</b> 9200830.16A <b>Date Received:</b> 03/15/2016 <b>Application Type:</b> Modification <b>Application Schedule:</b> TV-Sign-501(c)(2) Part II <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 10198/T03 <b>Existing Permit Issue Date:</b> 11/20/2015 <b>Existing Permit Expiration Date:</b> 04/30/2020				
<b>Total Actual emissions in TONS/YEAR:</b>							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2016	2.03	94.42	62.83	237.92	3.19	1.68	1.68 [Formaldehyde]
2015	1.18	82.02	48.68	203.62	3.88	1.59	1.59 [Formaldehyde]
2014	0.3200	71.94	21.39	179.03	20.91	1.13	1.13 [Formaldehyde]
2013	4.08	13.11	7.71	32.31	0.6300	0.2041	0.2040 [Formaldehyde]
<b>Review Engineer:</b> Betty Gatano  <b>Review Engineer's Signature:</b> <b>Date:</b>					<b>Comments / Recommendations:</b> Issue 10198/T04 <b>Permit Issue Date:</b> <b>Permit Expiration Date:</b>		

## **1. Purpose of Application**

INGENCO Renewable Development, LLC - Apex (INGENCO) currently holds Title V Permit No. 10198T03 with an expiration date of April 30, 2020 for a landfill gas-to-energy facility on the site of the South Wake Landfill located in Apex, Wake County, North Carolina. On March 15, 2016, the facility submitted a Part 2 significant modification under 15A NCAC 02Q .0501(c)(2) for eighteen landfill gas/diesel fuel-fired engine/generator units (ID Nos. ES-D1 through D6, ES-E1 through E6, and ES-F1 through F6). This equipment was first permitted under Air Permit No. 10198T02 issued on May 20, 2015.

## **2. Facility Description**

Landfill gas from the South Wake Landfill is burned as fuel in the internal combustion engine/generator units at INGENCO to produce electricity. INGENCO is permitted for 36 landfill gas/diesel fuel-fired internal combustion engines with one generator for each engine. Twenty-four of these engines are currently onsite. All the diesel fuel-fired engines were previously manufactured between 1996 and 1998 and are refurbished to burn a combination of landfill gas and diesel fuel. The engine/generator units are divided into six groups with six engine/generator units in each group. Each group of six exhaust into a common exhaust manifold with one stack, for a total six stacks, once all the engines are installed. The facility consists of an operation building housing the engines, office and maintenance areas, an oil storage and unloading area, and a landfill gas transport (positive displacement blower) for moving landfill gas from the collection and control system to the INGENCO facility at the required flow rate and pressure. The engines are designed to burn all the landfill gas produced by the South Wake Landfill. However, during periods when INGENCO is not in operation, the excess gas is burned in the South Wake Landfill flare.

## **3. Application Chronology**

March 15, 2016	Received application for permit modification.
March 16, 2016	Sent acknowledgment letter indicating that the application was not complete. The application did not contain the permitting fee of \$922.
April 20, 2016	Permit application fee of \$922 was received, at which point the permit application was deemed to be complete.
January 12, 2018	The permit application was transferred to Betty Gatano.
February 16, 2018	Betty Gatano sent an e-mail to Matthew Weeks of INGENCO requesting clarification on the emissions of hazardous air pollutants (HAPs) from the engines.
February 20, 2018	Draft permit and review forwarded for internal comments.
February 21, 2018	Charles McEachern of the Raleigh Regional Office (RRO) indicated he had no comments.
February 21, 2018	Received comments from Mark Cuilla, Permitting Supervisor.

February 26, 2018	Stanley Williams of the RRO provided minor comments on the draft permit.
February 26, 2018	Matthew Weeks provided updated B and D1 forms for the generators.
February 28, 2018	Betty Gatano, Booker Pullen, William Willets, Mark Cuilla and Joe Voelker met to discuss the categorization of the engines at INGENCO as new under MACT Subpart ZZZZ.
March 1, 2018	Betty Gatano had additional questions about the emissions from the 18 engines covered under this modification and the facility-wide emissions. Matthew Weeks provided a response to the questions and revised B and D1 forms that same day.
March 2018	Throughout the month of March, DAQ staff discussed the status of the engines at INGENCO. Based on these discussions, the DAQ has determined that the engines should be categorized as existing under MACT Subpart ZZZZ. See detailed discussion in Section 7 below.
April 9, 2018	A second draft of the INGENCO permit was forwarded internally for comments.
April 11, 2018	Charles McEachern from RRO indicated he had no comments on the revised draft.
April 12, 2018	Mark Cuilla indicated he had no comments on the revised draft.
April 16, 2018	Draft of permit and permit review forwarded to INGENCO for comments.
April 23, 2018	Matthew Weeks responded to comments.
May 9, 2018	INGENCO submitted a permit application for an ownership change to INGENCO Wholesale Power, LLC. This permit application will be processed separately from the “Part 2” permit application.
May 21, 2018	Betty Gatano responded to Matthew Weeks’ comments.
May 22, 2018	Draft permit forwarded to public notice.

#### 4. Permit Modifications/Changes and TVEE Discussion

The table below list changes to the current permit under this modification.

Pages	Section	Description of Changes
Throughout	-	Updated all dates and permit revision numbers.
Cover letter	--	Added statement on increment tracking. This statement was not included in the Part 1 permit.
Cover page	--	Updated mailing address and physical address of the facility.
3	Section 1.0 – Equipment Table	<ul style="list-style-type: none"> <li>• Changed format of the footnotes.</li> <li>• Removed reference to NSPS IIII in footnotes.</li> <li>• Removed footnote requiring submittal of a TV permit application within 12 months of commencement of operation of engines (ID Nos. ES-D1 through D6, or ES-E1 through E6, or F1 through F6).</li> </ul>
4	2.1 A – Regulations Table	<ul style="list-style-type: none"> <li>• Removed reference to NSPS Subpart IIII. The engines were manufactured prior to the trigger dates in NSPS Subpart IIII and are not subject to this rule.</li> <li>• Clarified the engines are subject to work practices standards under MACT Subpart ZZZZ.</li> </ul>
4	2.1 A.1.b	Revised testing condition to reflect most current permitting language.
4	2.1 A.2.b	Revised testing condition to reflect most current permitting language.
5	2.1. A.3	Clarified title of permit condition.
5	2.1 A.3.b	Revised testing condition to reflect most current permitting language.
5 – 6	2.1 A.3.c.ix and x	Reordered permit conditions for clarification
6	2.1 A.3.d	Removed permit condition specifying noncompliance for failure to submit reports.
6	2.1. A.4	Clarified title of permit condition.
6	2.1 A.4.b	Revised testing condition to reflect most current permitting language.
7	2.1 A.4.c x	Added non-compliance statement.
8	2.1. A.5	Clarified title of permit condition.
8 – 9	2.1 A.5	Updated MACT Subpart ZZZZ condition to reflect the engines status as “existing sources” under the MACT.
--	2.1 A.6	Removed permit condition. The engines were manufactured prior to the trigger dates in NSPS Subpart IIII and are not subject to this rule.
11 – 19	Section 3	Updated the General Conditions to the most recent revision (V5.2 04/03/2018).
20	Attachment	Updated the list of acronyms.

#### 5. Project and Emissions

The three groups of six landfill gas/diesel fuel oil-fired engines (ID Nos. ES-D1 through D6, ES-E1 through E6, and ES-F1 through F6) addressed under this modification are dual-fuel fired engine/generators used to generate electricity by burning landfill gas and diesel fuel oil. Each engine is a 475 bhp engine mated to a 350 kW (469 bhp) generator. The engines are “Detroit Diesel Series 60” (6-cylinder, 2.1 liter displacement each) engines with controllers optimized for the dual combustion of landfill gas and diesel fuel. The engines were manufactured between 1996 and 1998.

These engines were first permitted under Air Permit No. 10198T02 issued on May 20, 2015. The permit review associated with this permit is provided in Attachment 2 to this document. Air Permit No. 10198T02 required INGENCO to file a Title V Air Quality Permit Application on or before 12 months after commencing operation of emission sources (ID Nos. ES-D1 through D6, or ES-E1 through E6, or F1 through F6). Group D engines began operating on September 15, 2015, and this

permit application was submitted within 12 months of the commencement of operation of these engines. Group E and F engines have not yet been brought on site.

Emissions from the engines are uncontrolled. Emissions from firing diesel fuel and landfill gas in the generators are accounted for in the potential emissions shown in the table below.

<b>Pollutant</b>	<b>Before Limits (tons/yr)</b>	<b>Emissions After Limits (tons/yr)</b>
<b>Criteria Pollutants</b>		
PM <sup>1</sup>	116.0	66.0
PM <sub>10</sub> <sup>1</sup>	116.0	66.0
PM <sub>2.5</sub> <sup>1</sup>	116.0	66.0
SO <sub>2</sub> <sup>1</sup>	44.0	10.0
NO <sub>x</sub> <sup>1</sup>	1258.0	<250
CO <sup>1</sup>	1254.0	<250
VOC <sup>1</sup>	116.0	66.0
Lead <sup>2</sup>	7.34E-3	7.34E-3
<b>Hazardous Air Pollutants</b>		
1,1,2,2-Tetrachloroethane <sup>3</sup>	0.018	0.018
1,2 Dichloroethane (ethylene dichloride) <sup>3</sup>	0.004	0.004
Acetaldehyde <sup>4</sup>	0.442	0.442
Ethylbenzene <sup>3</sup>	0.048	0.048
Formaldehyde <sup>4</sup>	0.162	0.162
Hexane <sup>4</sup>	0.055	0.055
Hydrogen chloride (hydrochloric acid) <sup>5</sup>	2.74	2.74
Toluene <sup>4</sup>	0.237	0.237
Trichloroethylene (trichloroethane) <sup>3</sup>	0.036	0.036
Xylenes <sup>3,4</sup>	0.167	0.167
Total HAPs	3.92	3.92
<b>Notes:</b> 1. Emissions of PM/PM10/PM2.5, NO <sub>x</sub> , SO <sub>2</sub> , CO, and VOC are engineering estimates based on knowledge of firing landfill gas in these types of engines. 2. Emissions of lead are based US EPA FIRE database. 3. HAP emissions are determined from methodology in US EPA 42, Chapter 2.4, Municipal Solid Waste Landfills (draft). 4. HAP emissions are based on the firing of diesel fuel in the generators. 5. Emissions of HCl are an engineering estimate based on knowledge of firing landfill gas in these types of engines. 6. The ten largest HAPs are included in the table. 7. Emission were provided in the revised Form B submitted in an e-mail dated March 1, 2018 from Matthew Weeks.		

INGENCO was minor source under the Prevention of Significant Deterioration (PSD) rules prior to the Part 1 modification adding Group D, E, and F engines to the permit. For this modification to be considered a significant modification under PSD, the emissions increase must exceed the PSD major source level of 250 tons per year of an NSR pollutant. INGENCO accepted avoidance conditions

limiting CO and NOx emissions to less than 250 tons per year from these group of 18 engines (i.e., D, E, and F engines). Therefore, this project is not a major modification under PSD, and no PSD review is required.

Emissions of toxics air pollutants (TAPS) from the addition of the three groups of six landfill gas/diesel fuel oil-fired engines (ID Nos. ES-D1 through D6, ES-E1 through E6, and ES-F1 through F6) were evaluated under the Part 1 permit application. General Statute G.S. 143-215.107(a) and (b) as codified on May 1, 2014 exempts TAPS subject to the following federal emissions standards from NC Air Toxics rules provided the emissions do not “an unacceptable risk to human health:”

- 40 CFR Part 61 (NESHAP),
- 40 CFR Part 63 (NESHAP), or
- Case-by-Case MACT pursuant to 42 U.S.C. §7412(j)

These engines are subject to a 40 CFR Part 63 regulation (MACT Subpart ZZZZ) and were evaluated for exemption from NC Air Toxics under the Part 1 permit modification. DAQ concluded the addition of these engines does not present an “unacceptable risk to human health” based on facility-wide modeling. Thus, these engines are exempt from NC Air Toxics.<sup>1</sup> No changes are required under this Part 2 modification, and continued compliance is expected.

## **6. Regulatory Review**

The eighteen landfill gas/diesel fuel-fired engine/generator units (ID Nos. ES-D1 through D6, ES-E1 through E6, and ES-F1 through F6) are subject to the following regulations:

- 15A NCAC 02D .0516, Sulfur Dioxide from Combustion Sources – The engines are subject to 02D .0516. No monitoring, recordkeeping, or reporting (MRR) is required when firing diesel fuel or landfill gas in these engines because of the low sulfur content of the fuel. These fuels are inherently low enough in sulfur that continued compliance is expected.
- 15A NCAC 02D .0521, Control of Visible Emissions – The engines are subject to 02D .0521. No MRR is required when firing landfill gas or diesel fuel in these engines, as no visible emission are expected. Continued compliance is anticipated.
- 15A NCAC 02D .1111, Maximum Achievable Control Technology (MACT) – The engines are subject to “Stationary Reciprocating Internal Combustion Engines (RICE),” 40 CFR 63 Subpart ZZZZ (MACT Subpart ZZZZ or the RICE MACT). More information on the MACT is provided in Section 7.
- 15A NCAC 02Q .0317, “Avoidance Conditions” – INGenco has accepted avoidance conditions for 15A NCAC 02D .0530, Prevention of Significant Deterioration, for emissions of CO and NOx from these engines. More discussion on PSD avoidance is provided in Section 7.
- Senate Bill 3 (Session Law 2007-397) (aka SB3) – The permit currently includes the following emission limits and work practice requirements for SB3 Best Available Control Technology (BACT):
  - CO emissions shall not exceed 4.0 grams per horsepower-hour (g/hp-hr),

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<sup>1</sup> Yuki Puram (05/12/2015) and Booker Pullen (05/20/2015).

- NO<sub>x</sub> emissions shall not exceed 2.0 g/hp-hr, and
- PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, VOCs, Pb, and Hg shall be controlled from each engine using good combustion practices and the burning of landfill gas in the engine.

INGENCO must conduct inspection and maintenance of these engines to ensure compliance with the SB3 BACT limits. The facility must also conduct annual testing on groups of engines to demonstrate compliance. The most recent testing that has been reviewed was conducted on November 24, 2015, and compliance was demonstrated for Group D engines as shown in the table below:

Actual Generator Power Output/ (Gas Fraction)	Pollutant	EPA Method	Test Results	Emission Limit	Standard	Compliance
@ 269.9 kW each 77.1% of Max (93.8% LFG)	NO <sub>x</sub>	M7E	1.65g/kW-hr	11.5 g/kW-hr	60 Subpart IIII	Indicated
			1.23 g/HP-hr	2.00 g/HP-hr	SB3 BACT	Indicated
			0.39 lb/mmBtu	0.37 lb/mmBtu	PSD Reporting Emissions Factor	---
	CO	M10	4.47g/KW-hr	14.3 g/KW-hr	60 Subpart IIII	Indicated
			3.33 g/HP-hr	4.00 g/HP-hr	SB3 BACT	Indicated
			1.06 lb/mmBtu	0.94 lb/mmBtu	PSD Reporting Emissions Factor	---
<u>Notes:</u> <ul style="list-style-type: none"><li>• mmBtu = millions of Btu</li><li>• The results of the testing were approved by Gregg O’Neal of the Stationary Source Compliance Branch in a memorandum dated July 7, 2016.</li><li>• The facility has conducted additional testing in 2016 and 2017, but the results have not been reviewed to date.</li></ul>						

## 7. NSPS, NESHAPS/MACT, NSR/PSD, 112(r), CAM

### NSPS

The landfill gas/diesel fuel oil-fired engines (ID Nos. ES-A1 through A6, ES-B1 through B6, ES-C1 through C6, ES-D1 through D6, ES-E1 through E6, and ES-F1 through F6) are dual-fuel fired engine/generators used to generate electricity by burning landfill gas and diesel fuel oil. The generators are “Detroit Diesel Series 60” (6-cylinder, 2.1 liter displacement each) engines with controllers optimized for the dual combustion of landfill gas and diesel fuel. Emissions from the engines are uncontrolled.

Per 40 CFR Part 60, Subpart IIII, “Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines,” a compression ignition engine is any engine that is not a spark ignition engine. As specified under the definition of spark ignition engines in 40 CFR 60.4219, dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines. The dual fired engines at INGENCO do not operate above 98% energy from landfill gas. Optimum operating conditions

will be when the engines operate within 92-96% gas fraction (4% to 8% No. 2 fuel oil firing). These engines operate with standard Detroit Diesel Series 60 injectors and cams, without spark plugs or other sparking devices, firing a minimum of 2% diesel fuel oil, and therefore, they are considered compression ignition engines under NSPS Subpart IIII.

Although the engines are considered to be CI engines under NSPS Subpart IIII, these engines do not meet the applicability requirements of this regulation. Per 40 CFR 60.4200(a)(2) – (4), NSPS Subpart IIII is applicable to owners and operators of stationary CI internal combustion engines as specified in the following:

- (2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:
  - (i) Manufactured after April 1, 2006, and are not fire pump engines, or
  - (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.
- (3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.
- (4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

The engines were manufactured between 1996 and 1998, with cylinder displacement less than 10 liters and were modified to burn landfill gas with optimum efficiency. However, the modification to allow firing of landfill gas does not meet the definition “modification” (i.e., no increase in emissions expected) or reconstruction under 40 CFR 60 Subpart A.

#### 40 CFR 60.2

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

#### 40 CFR 60.15

(b) Reconstruction means the replacement of components of an existing facility to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
- (2) It is technologically and economically feasible to meet the applicable standards set forth in this part

**Because these engines were manufactured before 2006 and are not considered to be reconstructed or modified, these engines are not subject to NSPS Subpart IIII.**

#### NESHAPS/MACT

INGENCO was issued Air Permit No. 10198R00 on October 29, 2012 for eighteen (18) landfill gas/No. 2 fuel oil-fired internal combustion engines (A, B, and C engines) with one generator for each engine located at the South Wake Landfill, in Apex, Wake County, NC. Another eighteen (18) engines/generators (D, E, and F engines) were added under Air Permit No. 10198R01 issued on May 12, 2015.



When the engines were originally permitted, all thirty-six engines (36) were considered new engines in accordance 40 CFR 63.6590(a)(2)(iii) under the RICE MACT because they were fabricated on-site after June 12, 2006. The DAQ considered the on-site fabrication date of the engine the “construction” date for RICE MACT as specified in the preamble to the RICE MACT in Federal Register.<sup>2</sup>

INGENCO is an area source of hazardous air pollutants (HAP). New engines located at an area source of HAP meet the requirements of the RICE MACT by meeting the requirements of NSPS Subpart IIII as specified in 40 CFR 63.6590(c). Although these engines are NOT applicable NSPS Subpart IIII because they were manufactured prior to the NSPS Subpart IIII trigger dates and were not reconstructed or modified, the not-to-exceed (NTE) limits listed in 40 CFR 40 CFR60.4212(d) for the in-use testing of pre-2007 engines were included in the permit. The permit review for Air Permit No. 10198R00 indicates the following:

There are not any requirements under [NSPS] Subpart IIII for existing units (these engines manufactured pre-1998). However, because the MACT indicates that the limits in Subpart IIII must be met to show compliance, *the DAQ will place the NTE limits listed in §40 CFR60.4212(c).*<sup>3</sup>

As part of the permit review for this Part 2 application, the DAQ reevaluated the classification of the engines as new sources under the RICE MACT. As specified in 40 CFR40 CFR 63.6590(a)(2)(iii), a RICE located at an area source of HAP emissions is an existing source under the RICE MACT if construction or reconstruction of the stationary commenced before June 12, 2006. The NESHAP General Provisions at 40 CFR 63.2 define construction to mean " ... the on-site fabrication, erection, or installation of an affected source ...." Commenced is defined at 40 CFR 63.2 to mean "... an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction." Therefore, the date that determines whether an engine is existing or new under 40 CFR 63.6590(a) would be the date that the owner/operator entered into a contractual obligation to undertake and complete, within a reasonable amount of time, a continuous program for the on-site fabrication, erection, or installation of the stationary engine.

The definition of construction in 40 CFR 63.2 further states the following: "Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location." Thus, relocation of an engine from one facility to another is not considered to be construction of the engine.<sup>4</sup>

Upon reevaluation, the DAQ considers the engines to be relocated to INGENCO, and relocating does not constitute commencing construction of the engines. Therefore, the engines were NOT constructed (only relocated) or reconstructed after June 12, 2006 and are considered existing engines under the RICE MACT.

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<sup>2</sup> Preamble to the RICE MACT: Federal Register/Vol. 69, No. 114/Tuesday, June 15, 2004/Rules and Regulations, page 33481.

<sup>3</sup> Booker Pullen (10/29/2012).

<sup>4</sup> US EPA to Allison Transmission, Inc. “Applicability of the National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR Part 63, Subpart ZZZZ.” May 24, 2011

The DAQ also reviewed EPA’s Applicability Determination Index for additional guidance on how to characterize these engines under the RICE MACT. An applicability determination entitled “Applicability to a Non-Stationary Engine Relocated for Use as a Stationary Engine” dated May 12, 2014, addressed a situation similar to the engines at INGenco. The facility requesting guidance from EPA wanted to purchase an existing marine propulsion engine and operate it as a stationary source at an existing power plant in Alaska. The engine was manufactured in 1999 and had been used as a marine propulsion engine. The EPA concluded the engine was not subject to NSPS Subpart IIII because it was manufactured prior to the trigger dates in the NSPS and was an existing engine subject to the RICE MACT.

In accordance to 40 CFR 63.6603(a), an existing stationary RICE located at an area source of HAP emissions must comply with applicable requirements in Table 2d and the operating limitations in Table 2b of the RICE MACT. The requirements for the engines at INGenco under the RICE MACT are summarized below:

<b>Engine Type</b>	<b>Requirement</b>	<b>Reference</b>
Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	Table 2d(13)
	Develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:	40 CFR 63.6625(e)(6)
	Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes	40 CFR 63.6625(h)

The permit condition for the RICE MACT will be updated under this permit modification to reflect the re-evaluation of the engines as existing sources under the MACT. The revised permit condition is provided in Attachment 1 to this review.

#### PSD

INGenco has accepted PSD avoidance conditions as shown in the table below for its engines. With these two avoidance conditions, the facility’s potential emissions exceed the PSD major source threshold of 250 tons per year for CO and NO<sub>x</sub>, and the facility is considered a major source under PSD.

<b>Engines</b>	<b>PSD avoidance Limit</b>	<b>Date and Permit Number where PSD avoidance limit was added.</b>
ES-A1 through A6 ES-B1 through B6 ES-C1 through C6	NO <sub>x</sub> < 250 tons per consecutive 12-month period  CO < 250 tons per consecutive 12-month period	Permit No. 10198R00 issued on October 29, 2012

Engines	PSD avoidance Limit	Date and Permit Number where PSD avoidance limit was added.
ES-D1 through D6 ES-E1 through E6 ES-F1 through F6	NO <sub>x</sub> < 250 tons per consecutive 12-month period  CO < 250 tons per consecutive 12-month period	Permit No. 10198R01 issued on May 12, 2015

No changes to the permit are required under this permit modification, and continued compliance is anticipated.

#### 112(r)

The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in 112(r). The Part 2 modification does not affect the 112(r) status of the facility.

#### CAM

CAM is not applicable to INGENCO because none of the engines are controlled.

### **9. Facility Wide Air Toxics**

As noted in Section 5 above, the DAQ concluded under the Part 1 permit application that TAP emissions from this modification do not pose an unacceptable risk to human health and the engines, which are subject to MACT Subpart ZZZZ, are exempt for NC air toxics under 15A NCAC 02Q .0702(a)(27). No changes are required under this Part 2 modification, and continued compliance is expected.

### **10. Facility Emissions Review**

Potential emissions after the additions of the engines are provided in the table below. Actual emissions from INGENCO are reported in the header of this permit review.

Pollutant	TV Potential Emissions before Limits (tons/yr)	TV Potential Emissions after Limits (tons/yr)
PM	232	232
PM <sub>10</sub>	132	132
PM <sub>2.5</sub>	132	132
SO <sub>2</sub>	88	88
NO <sub>x</sub>	1258.0	<500
CO	1254.0	<500
VOC	232	232
<u>Notes:</u> <ul style="list-style-type: none"> <li>Emission were provided in the revised Form D-1 submitted in an e-mail dated March 1, 2018 from Matthew Weeks.</li> <li>The facility has taken two (2), 250 tpy PSD avoidance limits for NO<sub>x</sub> and CO.</li> </ul>		

## **11. Compliance Status**

Stanley Williams of the RRO conducted the most recent inspection on October 31, 2017. The facility was observed to be in apparent compliance during the inspection. Additionally, a signed Title V Compliance Certification (Form E5) indicating the facility was in compliance with all applicable requirements was included with the application for permit modification.

A Notice of Violation/Notice of Recommendation for Enforcement was issued on August 13, 2015 for exceeding emission limits under SB3 BACT for NO<sub>x</sub> and CO during testing on September 9, 2014 and October 24, 2014. Testing was conducted on Group B Generators ES-B1 through ES-B6 during the 2014 testing. INGENCO addressed the emission exceedances by submitting a permit application on October 8, 2015 to revise SB3 BACT limits based on updated information. Air Quality Permit No. 10198T03 was issued on November 20, 2015 with the revised SB3 BACT limits. The NOV/NRE was resolved with that permitting action.

## **12. Public Notice/EPA and Affected State(s) Review**

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. Virginia and Forsyth County Office of Environmental Assistance and Protection are affected areas within 50 miles of this facility and will be notified accordingly.

## **13. Other Regulatory Considerations**

- A P.E. seal is NOT required for this application.
- A zoning consistency is not required with the Part 2 application but was included with the Part 1 application (9200830.14A), as required.
- A permit fee of \$922 was required and was submitted on April 20, 2016

## **14. Recommendations**

The permit application for INGENCO Wholesale Power, LLC - Apex, Apex, Wake County, NC has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 10198T04.

## **Attachment 1**

### **Updated Permit Condition for RICE MACT**

#### **5. 15A NCAC 02D .1111: Maximum Achievable Control Technology**

**Applicability** [40 CFR 63.6585, 63.6590(a)(1)(iii),(iv)]

- a. For this emission source(s) (existing non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis located at an area source of HAP emissions), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR 63, “Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.” and Subpart A “General Provisions.”

**Definitions and Nomenclature**

- b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.6675 shall apply.

**Applicability Date** [40 CFR 63.6595(a)(1)]

- c. The Permittee shall comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013.

**Notifications** [40 CFR 63.6645(a)(5)]

- d. The Permittee has no notification requirements.

**General Provisions** [40 CFR 63.6665]

- e. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart ZZZZ

**Operating and Maintenance Requirements** [15A NCAC 02Q .0508(f)]

- f. The Permittee shall use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. [40 CFR 63.6604(a)]
- g. During periods of startup of the IC engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6625(h)]
- h. Except during periods of startup of the IC engine, the Permittee shall:
  - i. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;
  - ii. Inspect air cleaner every 1,440 hours of operation or annually, whichever comes first and replace as necessary;
  - iii. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[40 CFR 63.6603(a), Table 2d]
- i. The permittee shall be in compliance with the emission limitations, operating limitations and other requirements that apply at all times. [40 CFR 63.6605(a)]
- j. The Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]
- k. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which

must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e) and 63.6640(a), Table 6]

- l. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 A.5.f through k are not met.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- m. The Permittee shall keep the following:
  - i. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
  - ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
  - iii. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
  - iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with Section 2.1 A.5.j, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
  - v. Records of the maintenance conducted on the RICE pursuant to Section 2.1 A.5.k. [40 CFR 63.6655(d) and (e)]
- m. The Permittee shall keep each record in a form suitable and readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a), (b), (c)]
- n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the recordkeeping in Section 2.1 A.5.m and n is not conducted or the records maintained.

**Reporting** [15A NCAC 02Q .0508(f), 40 CFR 63.6650(f)]

- o. The Permittee shall submit a summary report, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance must be clearly identified.

**Attachment 2**  
Permit Review for Part 1 Application

<b>NORTH CAROLINA DIVISION OF AIR QUALITY</b>  <p style="text-align: center;">Air Permit Review – 1<sup>st</sup> Time Title V</p> <p>Permit Issue Date: May 20, 2015</p>			Region: Raleigh Regional Office County: Wake NC Facility ID: 9200830 Inspector's Name: Stanley Williams Date of Last Inspection: 03/19/2015 Compliance Code: 3 / Compliance - inspection				
<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): INGENCO Renewable Development, LLC</p> <p>Facility Address:                  INGENCO Renewable Development, LLC                  6300 Old Smithfield Road                  Apex, NC 27502</p> <p>SIC: 4931 / Elec &amp; Other Services Combined                  NAICS: 221112 / Fossil Fuel Electric Power Generation</p> <p>Facility Classification: Before: Title V After: Title V                  Fee Classification: Before: Title V After: Title V</p>			SIP: 15A NCAC 2Q .0501(c)(1) NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: N/A NC Toxics: 15A NCAC 2Q .0702(a)(27) 112(r): N/A  Other: GHG emissions evaluated				
Contact Data			Application Data				
<p style="text-align: center;">Facility Contact</p> <p>Eric Troen                  Environmental Compliance Manager                  2250 Dabney Road                  Richmond, VA 23230                  (804) 521-3507</p>	<p style="text-align: center;">Authorized Contact</p> <p>Thomas Kennedy                  Senior Vice President                  2250 Dabney Road                  Richmond, VA 23230</p>	<p style="text-align: center;">Technical Contact</p> <p>Robert Greene                  Environmental Compliance Manager                  2250 Dabney Road                  Richmond, VA 23230                   bobg@ingenco.com</p>	Application Number: 9200830.14A Date Received: 08/12/2014 Application Type: Modification Application Schedule: TV-1st Time  <p style="text-align: center;">Existing Permit Data</p> Existing Permit Number: 10198R01 Existing Permit Issue Date: May 12, 2015 Existing Permit Expiration Date: 09/30/2017				
Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2013	4.08	13.11	7.71	32.31	0.6300	0.2041	0.2040 [Formaldehyde]
Review Engineer: Booker Pullen Regional Engineer: Charles McEachern  Review Engineer's Signature:			<p style="text-align: center;">Comments / Recommendations:</p> Issue: 10198T02 Permit Issue Date: May 20, 2015 Permit Expiration Date: April 30, 2020				

- I. Introduction:  
 INGENCO Renewable Development, LLC operates a landfill gas-to-energy facility on the site of the South Wake Landfill located in Wake County, Apex, North Carolina. Landfill gas from the South Wake facility is burned as fuel in the internal combustion engine/generator units to produce electricity. Application 9200830.14A was received on August 12, 2014, and

was considered administratively complete on that date. This application will be processed as a 1<sup>st</sup> Time Title V Permit and will be sent through both the 30-day public notice and the 45-day EPA review at this time.

**II. Description:**

The current facility is comprised of eighteen landfill gas/Diesel fuel-fired internal combustion engines with one generator for each engine. All of the Diesel fuel-fired engines were previously manufactured between 1996 and 1998 and will be refurbished to burn a combination of landfill gas and Diesel fuel. Permit No. 10198R01 was issued on May 12, 2015 to add an additional eighteen engine/generator units at the facility. The engine/generator units will be divided into six groups with six engine/generator units in each group. Each group of six will exhaust into a common exhaust manifold with one stack (total six stacks). The facility consists of an operation building housing the engines, office and maintenance areas, an oil storage and unloading facility, and a landfill gas transport (positive displacement blower) for moving landfill gas from the collection & control system to the INGENCO facility at the required flow rate and pressure. The engines are designed to burn all of the landfill gas that is produced by the South Wake Landfill. However, during periods that the INGENCO facility is not in operation, the excess gas will be burned in the South Wake Landfill flare.

**III. Purpose of this application (9200830.14A, to be issued as Air Permit No. 10198T02):**

- A. To fulfill the requirement in Air Permit No. 10198R00 to submit a Title V Permit Application within one year of operation of emission sources ES-A1 through A6, B1 through B6, and C1 through C6.
- B. Add the eighteen Landfill gas/Diesel fuel-fired engine/generator units ES-D1 through D6, E1 through E6, and F1 through F6 with a footnote that “the Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation of emission sources these sources. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.”

**IV. Statement of Compliance:**

The DAQ has reviewed the compliance status of this facility. Mr. Stanley Williams of the Raleigh Regional Office performed a facility inspection on March 20, 2015 and states that the facility appeared to be in compliance with all applicable requirements.

**V. Changes to the existing Permit per application 9200830.14A**

Old Page No.	New Page No.	Condition No.	Changes
Page 1	Page 1	Cover letter	Changed date of cover letter, changed permit revision number, changed complete application received date
Page 2	Page 2	Cover letter	Changed date of letter, changed effective date of permit, changed engineer's name to Booker T. Pullen, added Heather Ceron to copy list
N/A	Page 3	Cover letter	added the “changes to the permit” table to reflect the changes per application 9200830.14A
<b>Body of the Permit</b>			
All pages	All pages	Heading	Changed permit revision to T02
N/A	All pages	Specific Limitations and Conditions	Changed permit into Title V format
N/A	Page 3		Added footnote concerning the permit shield for sources ES-D1 through D6, E1 through E6, and F1 through F6
Page 5	Pages 5 and 7		Administratively amended the permit to change the emission factors for E <sub>NOx</sub> and E <sub>CO</sub> to equal the results of the stack test results dated 9/9/2014 for Diesel fuel
N/A	Pages 12-22	Section 3	Added Title V general conditions



VI. Source-by Source Evaluation:

A. Thirty-Six landfill gas/Diesel fuel oil, duel fuel-fired, compression ignition engine/generator units

Source ID No.	Emission Source Description	Rating	
Six engine/electrical generator units exhausting to a common manifold and stack			
ES-A1 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-A2 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-A3 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-A4 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-A5 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-A6 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
Six engine/electrical generator units exhausting to a common manifold and stack			
ES-B1 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-B2 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-B3 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-B4 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-B5 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-B6 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
Six engine/electrical generator units exhausting to a common manifold and stack			
ES-C1 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-C2 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-C3 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-C4 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-C5 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-C6 * ^ #	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
Six engine/electrical generator units exhausting to a common manifold and stack			
ES-D1 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-D2 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-D3 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-D4 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-D5 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-D6 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
Six engine/electrical generator units exhausting to a common manifold and stack			
ES-E1 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-E2 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-E3 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-E4 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-E5 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-E6 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
Six engine/electrical generator units exhausting to a common manifold and stack			
ES-F1 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-F2 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-F3 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-F4 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-F5 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW
ES-F6 * ^ # @	Landfill gas/Diesel fuel oil-fired engine/generator unit	469 hp	350 kW

\* MACT Subpart ZZZZ

^ NSPS Subpart IIII (for MACT compliance)

# State BACT (SB3)

@ The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation of emission sources (ID Nos. ES-D1 through D6, or ES-E1 through E6, or F1 through F6) in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

1. Description: All of these dual-fuel fired engine/generators will be used to generate electricity by burning landfill gas and Diesel fuel oil in the engines. These generators are “Detroit Diesel Series 60” (6 cylinder, 2.1 liter displacement each) engines with controllers optimized for the dual combustion of landfill gas and Diesel fuel. Emissions from the engines are uncontrolled.

Per 40 CFR Part 60, Subpart IIII (§60.4219), dual fuel engines are defined as engines that burn both a liquid fuel (typically Diesel fuel, compression ignition) and a gaseous fuel (typically natural gas, spark ignition). These types of engines are considered to be “spark ignition” engines if the primary fuel is gaseous, and the two fuels are burned at an annual average ratio of less than 2 parts (2%) Diesel fuel to 100 parts total fuel on an energy equivalent basis. The engines used at this facility will not operate above 98% energy from landfill gas. Therefore, these engines will operate with standard Detroit Diesel Series 60 injectors and cams, without spark plugs or other sparking devices, firing a minimum of 2% Diesel fuel oil and are considered compression ignition engines. NSPS, Subpart JJJJ does not apply to these engines.

2. Applicable Regulatory Requirements: These generators (ES-D1 through D6, E1 through E6, and F1 through F6) were manufactured after July 1, 1971. They will be subject to 20% opacity.

Per engine design, these engines will not operate above a ratio of 2 parts Diesel fuel to 100 parts total fuel (landfill gas and Diesel). Therefore the engines are not considered spark ignited under the NSPS, Subpart JJJJ definition as explained above. All of the engines at this facility were manufactured between 1996 and 1998, with cylinder displacement less than 10 liters and will be changed to burn landfill gas with optimum efficiency. The New Source Performance Standards regulation listed under Subpart IIII is not applicable to these engines because they do not meet the definition of “new”, “reconstructed”, or “modified” in accordance with the regulation.

The final rule for this MACT (Subpart ZZZZ) was revised, and re-published in the Federal Register on January 18, 2008 with an effective date of March 18, 2008 which included area sources. Per 40 CFR §63.6590(c), new generators (under the MACT definition) that are located at an area source with a site rating of less than 500 hp, that combust landfill gas equivalent to 10 percent or more for the gross heat input on an annual basis, can meet the requirements of the RICE MACT (Subpart ZZZZ) by meeting the requirements of the NSPS, Subpart IIII for compression ignition engines.

*Even though the engines in this permit pre-date NSPS Subpart IIII and would not be classified as new, reconstructed, or modified, the limits in the NSPS will be placed in the permit per the RICE MACT requirement to meet the NSPS Subpart IIII limits.*

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	Less than 2.3 lbs per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Hazardous air pollutants	Meet the requirements of NSPS, Subpart IIII for pre-2007 model year engines	15A NCAC 2D .1111 (Subpart ZZZZ) 40 CFR 63.6590(c)
Carbon monoxide Nitrogen oxide Particulate matter Hydro carbons	NTE limits per 40 CFR 60.4212(d)	15A NCAC 2D .0524 (Subpart IIII) 40 CFR 60.4212
Nitrogen oxide	Less than 250 tons per year	15A NCAC 2Q .0317 of 2D .0530 PSD Avoidance
Carbon monoxide	Less than 250 tons per year	15A NCAC 2Q .0317 of 2D .0530 PSD Avoidance

Carbon monoxide	BACT limits	NC GS §62-133.8 (g) & State BACT
Nitrogen oxide	CO = 2.75 g/hp-hr	--State Enforceable Only--
Particulate matter (10 microns)	NOx = 1.26 g/hp-hr	
Particulate matter (25 microns)	PM10 = Burning lfg & ≤ 5% Diesel fuel	
Sulfur dioxide	PM2.5 = Burning lfg & ≤ 5% Diesel fuel	
Volatile organic compounds	SO <sub>2</sub> = Burning lfg & ≤ 5% Diesel fuel	
Lead	VOC = Burning lfg & ≤ 5% Diesel fuel	
Mercury	Lead = Burning lfg & ≤ 5% Diesel fuel	
	Mercury = Burning lfg & ≤ 5% Diesel fuel	

- a. 15A NCAC 2D .0516 “Sulfur Dioxide Emissions From Combustion Sources”
- i. Emissions of sulfur dioxide from these engines shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Sulfur dioxide emissions from the firing of Diesel fuel oil and landfill gas should always be in compliance with this regulation.

Testing [15A NCAC 2D .0508(f)]

- ii. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0508(f).

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- iii. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of landfill gas and Diesel fuel oil in any engine/generator unit.

- b. 15A NCAC 2D .0521"Control Of Visible Emissions”

Regulation Analysis:

- i. These generators were manufactured after July 1, 1971, and each is therefore subject to the State regulation 15A NCAC 2D .0521(d). Per this regulation visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period for each boiler.

Compliance is expected with this regulation because all of the generators will be firing Diesel fuel oil and landfill gas.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- ii. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of Diesel fuel oil and landfill gas in any engine/generator unit because it should always be in compliance with the opacity standard during normal operation.

- c. Engines (ES-A1, A2, A3, A4, A5, A6, B1, B2, B3, B4, B5, B6, C1, C2, C3, C4, C5, and C6) shall discharge into the atmosphere less than 250 tons of nitrogen dioxide and less than 250 tons per year of Carbon monoxide per consecutive 12-month period. [15A NCAC 2D .0530]

Engines (ES-D1, D2, D3, D4, D5, D6, E1, E2, E3, E4, E5, E6, F1, F2, F3, F4, F5, and F6) shall discharge into the atmosphere less than 250 tons of nitrogen dioxide and less than 250 tons per year of Carbon monoxide per consecutive 12-month period. [15A NCAC 2D .0530]

15A NCAC 2Q .0317 of 2D .0530 “PSD Avoidance” for Nitrogen Dioxide and Carbon Monoxide (the permit will have separate PSD Avoidance conditions written for each of the two eighteen engine/generator groups).

- i. In order to avoid applicability of 15A NCAC 02D .0530 (g) for major sources and major modifications, the engine/generator units in each of the two eighteen engine/generator groups shall discharge into the atmosphere less than 250 tons of nitrogen dioxide total and less than 250 tons per year of Carbon monoxide total per consecutive 12-month period. [15A NCAC 2D .0530]

Testing [15A NCAC 2D .0501(c)(3)]

- ii. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:
  - (A) The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
  - (B) The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
  - (C) During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
  - (D) The Permittee shall submit two copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
    - (1) a description of the training and air testing experience of the person directing the test;
    - (2) a certification of the test results by sampling team leader and facility representative;
    - (3) a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
    - (4) a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
    - (5) all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
    - (6) example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
    - (7) documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
  - (E) The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
  - (F) The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

Monitoring/Recordkeeping [15A NCAC 02Q .0508 (f)]

- iii. To ensure emissions of nitrogen oxides and carbon monoxide do not exceed the limitation listed above, the following requirements shall apply.
  - (A) The Permittee shall take readings at least once every hour of the gas fraction of the energy supplied to each generator in operation. Gas fraction is defined as the heat input supplied by landfill gas divided by the total heat input supplied to the generators. The Permittee shall record the total heat input supplied to every generator operated for every calendar day.

- (B) The Permittee shall use the gas fractions obtained and the daily total heat input supplied to each generator to calculate nitrogen oxide and carbon monoxide emissions for each calendar day.
- (C) The Permittee shall use the following emission factors to determine nitrogen oxides and carbon monoxide emissions until the Division of Air Quality (DAQ) approval of performance test results required for compliance with New Source Performance Standards, in accordance with 40 CFR Part 60, Subpart IIII, and the administrative amendment of this permit to incorporate those results.

Table 1: (the values in this table apply to all engines at the facility)

Gas Fraction	Diesel Fuel Oil NO <sub>x</sub> (lbs/mmBtu) {E <sub>NO<sub>x</sub> (d)</sub> }	Landfill Gas NO <sub>x</sub> (lbs/mmBtu) {E <sub>NO<sub>x</sub> (lfg)}</sub> }	Diesel Fuel Oil CO (lbs/mmBtu) {E <sub>CO (d)</sub> }	Landfill Gas CO (lbs/mmBtu) {E <sub>CO (lfg)}</sub> }
0% – 50%	2.15	-0.4	0.26	5.25
80% - 98%	0.37 *		0.94 *	
> 50% - < 80%	The Permittee must document and record a basis for nitrogen oxide and carbon monoxide emissions if the gas fraction falls in this range. All such instances of gas fractions in this range must be recorded and made available to DAQ upon request.			

\* September 9, 2014 stack test results

- (D) The facility shall be equipped with devices to continuously measure and record the consumption of treated landfill gas and/or diesel fuel in the engines.
- (E) The Permittee shall sum the total daily fuel consumption of distillate fuel oil and treated landfill gas in the engines to determine monthly emissions for each calendar month.
- (F) The Permittee shall record monthly emissions of nitrogen oxides and carbon monoxide from the engine/generator units.
- (G) Records of the calculations performed to determine facility nitrogen oxide and carbon monoxide emissions shall be kept on-site and made available to the DAQ personnel upon request.
- (H) Fuel supplier certification shall be kept on-site and made available to DAQ personnel upon request.
- (I) The Permittee shall keep each record on file for a minimum of three years.

The emissions shall be calculated monthly for each engine according to the following equations using the values listed in Table 1 above:

$$NO_x = \left[ \frac{A \text{ (gallons)}}{\text{(month)}} \times \frac{CV_d \text{ (Btu)}}{\text{(gallon)}} \times \% \text{ liquid} \times \frac{E_{NO_x(d)}}{1 \times 10^6 \text{ Btu}} \times \frac{1 \text{ ton } NO_x}{2000 \text{ lbs } NO_x} \right] + \left[ \frac{B \text{ (ft}^3\text{)}}{\text{(month)}} \times \frac{CV_{lfg} \text{ (Btu)}}{\text{(ft}^3\text{)}} \times \% \text{ lfg} \times \frac{E_{NO_x lfg}}{1 \times 10^6 \text{ Btu}} \times \frac{1 \text{ ton } NO_x}{2000 \text{ lbs } NO_x} \right]$$

$$CO = \left[ \frac{A \text{ (gallons)}}{\text{(month)}} \times \frac{CV_d \text{ (Btu)}}{\text{(gallon)}} \times \% \text{ liquid} \times \frac{E_{CO(d)}}{1 \times 10^6 \text{ Btu}} \times \frac{1 \text{ ton } CO}{2000 \text{ lbs } CO} \right] + \left[ \frac{B \text{ (ft}^3\text{)}}{\text{(month)}} \times \frac{CV_{lfg} \text{ (Btu)}}{\text{(ft}^3\text{)}} \times \% \text{ lfg} \times \frac{E_{CO lfg}}{1 \times 10^6 \text{ Btu}} \times \frac{1 \text{ ton } CO}{2000 \text{ lbs } CO} \right]$$

**Where:**

- A = gallons of Diesel fuel oil consumed per month  
B = cubic feet of landfill gas consumed per month  
CV<sub>d</sub> = calorific value (heat content) of Diesel fuel oil (137,000 Btu/gallon)  
CV<sub>lfg</sub> = calorific value (heat content) landfill gas

$$\left[ CV_{lfg \text{ (heat content)}} = \frac{\% \text{ Methane}}{100} \times \frac{996.65 \text{ Btu}}{\text{standard cubic feet}} \right]$$

- % Diesel fuel = percentage of liquid Diesel fuel content  
% lfg = percentage of landfill gas content  
E<sub>NOx (d)</sub> = Emission factor for NOx from Diesel fuel oil (lbs NOx/million Btu)  
E<sub>NOx (lfg)</sub> = Emission factor for NOx from landfill gas (lbs NOx/million Btu)  
E<sub>CO (d)</sub> = Emission factor for CO from Diesel fuel oil (lbs CO/million Btu)  
E<sub>CO (lfg)</sub> = Emission factor for CO from landfill gas (lbs CO/million Btu)

**Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
- The monthly nitrogen dioxide and carbon monoxide emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months; a
  - Copies of Diesel fuel oil certification records.
- e. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart ZZZZ “National Emission Standards For Hazardous Air Pollutants For “New” Stationary Reciprocating Internal Combustion Engines (RICE) Located At An Area Source of Hazardous Air Pollutants (HAPs)
- A1 – D6 (Landfill gas/Diesel fuel-fired engine (469 hp each)/generator (350 kW each)
  - B1 – E6 (Landfill gas/Diesel fuel-fired engine (469 hp each)/generator (350 kW each)
  - C1 – F6 (Landfill gas/Diesel fuel-fired engine (469 hp each)/generator (350 kW each)
  - D1 – D6 (Landfill gas/Diesel fuel-fired engine (469 hp each)/generator (350 kW each)
  - E1 – E6 (Landfill gas/Diesel fuel-fired engine (469 hp each)/generator (350 kW each)
  - F1 – F6 (Landfill gas/Diesel fuel-fired engine (469 hp each)/generator (350 kW each)

INGENCO Renewable Development, LLC is considered an area source of HAPs because it does not emit greater than 10/25 tons per year. All of these RICE engines are considered “new” in accordance with MACT Subpart ZZZZ because they will be placed at the site after June 12, 2006. RICE engines D1 through D6, E1 through E6 and F1 through F6 have not been fabricated on site to date.

Note: For the RICE MACT, the onsite fabrication date of the engine is considered the “construction” date. See the Preamble documents in Federal Register/Vol. 69, No. 114/Tuesday, June 15, 2004/Rules and Regulations, page 33481. [40 CFR §63.6590(a)(2)(iii)]. Compliance with the MACT is satisfied by compliance with the NSPS Subpart IIII.

For New Source Performance Standards, all of the compression ignition units (A1 through A6, B1 through B6, C1 through C6, D1 through D6, E1 through E6, and F1 through F6) at this site are considered “existing” under NSPS Subpart IIII because the engines are not “new”, or “reconstructed” or “modified”. There are not any requirements under 15A NCAC 2D .0524, Subpart IIII for existing units (these engines were manufactured pre-1998). However, because the MACT indicates that the limits in Subpart IIII must be met to show compliance, *the DAQ will place the NTE limits listed in §40 CFR60.4212(d) for the in-use testing of pre-2007 engines.*

The Permittee shall comply with the following emission standards for compression ignition (CI) engines for model year pre-2007 (469 hp engines).

The exhaust limits will be changed to the NTE values in the permit using Equation 1 of 40 CFR §60.4212(c).

Exhaust emission standards:

CO:  $8.50 \times 1.25 = 10.63$  g/hp-hr

NOx:  $6.90 \times 1.25 = 8.63$  g/hp-hr

PM:  $0.40 \times 1.25 = 0.50$  g/hp-hr

HC:  $1.00 \times 1.25 = 1.25$  g/hp-hr

[Per 40 CFR §60.4212(c)]

*Note: MACT Subpart ZZZZ is listed is listed on Table 2 of the Sierra Club vs. EPA 551 F.3d 1019 (D.C. Cir. 2008) and is not affected by the vacature of 40 CFR §§63.6(f)(1) and 63.6(h)(1).*

- VII. A Professional Engineers Seal is not required for this 1<sup>st</sup> Time Title V permit.
- VIII. A consistency determination was required for the last 300 permit modification for this facility. It is not required for this 1<sup>st</sup> Time Title V permit because there have been no changes since the last modification in revision R01.
- IX. No application fee is required for this 1<sup>st</sup> Time Title V permit.
- X. The appropriate number of copies of the application was received by the DAQ on August 12, 2014.
- XI. The application was signed by an authorized official as defined by 15A NCAC 2Q .0304(j).
- XII. Toxic Air Pollutant Emissions:  
The North Carolina Division of Air Quality's air toxics program is a "risk-based" regulatory program designed to protect the public health by limiting emissions of toxic air pollutants from man-made sources. In the previous modification (Permit Revision R01) to add an additional eighteen engine/generator units to the existing eighteen units, a facility-wide toxic air pollutant evaluation was performed. The DAQ concluded that the thirty-six landfill gas/Diesel fuel-fired engine/generator units located at the INGenco Renewable, Development facility will not present an unacceptable risk to human health based on facility-wide modeling. All toxic air pollutants from this facility come from sources that are subject to a federal MACT regulation. General Statute G.S. 143-215.107(a) was approved on June 28, 2012 and this Act exempts from State Air Toxics those sources of emissions that are subject to certain Federal emissions requirements under 40 CFR Part 61 (NESHAP), Part 63 (NESHAP), or Case-by-Case MACT pursuant to 42 U.S.C. §7412(j). This statute was placed into the North Carolina State Air Toxics regulations on May 1, 2014 under Regulation 15A NCAC 2Q .0702(a)(27). Toxic air pollutant emission limits will not be placed into the permit in accordance with 15A NCAC 2Q .0702(a)(27).
- XIII. State BACT (SB3)- STATE ENFORCEABLE ONLY:  
A "State Enforceable" BACT analysis was performed in the previous permit in order to be in compliance with Senate Bill 3 (SB3) – Session Law 2007-397. This law contains a requirement for any biomass combustion process that is otherwise not subject to the Best Available Control Technology (BACT) requirements of the PSD program and that is determined to be a "new renewable energy facility" to meet BACT.

(Hg).  
the

The pollutants covered under SB3 are Carbon Monoxide (CO), Nitrogen Oxide (NO<sub>x</sub>), Particulate (PM<sub>10</sub>/PM<sub>2.5</sub>), Volatile Organic Compounds (VOCs), Sulfur Dioxide (SO<sub>2</sub>), Lead (Pb), and Mercury. SB3 BACT shall be applied to emissions resulting from biomass combustion on a per pollutant basis. In case of co-firing biomass with non-biomass fuels, SB3 will apply only to that portion of potential emissions that result from biomass combustion. There is no significance level or lesser quantity cutoff at which SB3 would not be triggered.

- A1 – A6 (Landfill gas/Diesel fuel-fired engine/generator unit, 469 hp, 350 kW, each)
- B1 – B6 (Landfill gas/Diesel fuel-fired engine/generator unit, 469 hp, 350 kW, each)
- C1 – C6 (Landfill gas/Diesel fuel-fired engine/generator unit, 469 hp, 350 kW, each)
- D1 – D6 (Landfill gas/Diesel fuel-fired engine/generator unit, 469 hp, 350 kW, each)
- E1 – E6 (Landfill gas/Diesel fuel-fired engine/generator unit, 469 hp, 350 kW, each)
- F1 – F6 (Landfill gas/Diesel fuel-fired engine/generator unit, 469 hp, 350 kW, each)

facility

Under the provisions of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), the Permittee is categorized as a new renewable energy facility that delivers electric power to an electric power supplier. SB3, 62-133.8(g) requires biomass combustion processes at a new renewable energy facility to meet Best Available Control Technology (BACT).

Best Available Control Technology:

1. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8(g) for Carbon Monoxide:
  - Carbon Monoxide emissions shall not exceed 2.75 g/hp-hr
2. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8 (g) for Nitrogen Oxide:
  - Nitrogen Oxide emissions shall not exceed 1.26 g/hp-hr.
3. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8 (g) for PM<sub>10</sub>/PM<sub>2.5</sub>:
  - PM<sub>10</sub>/PM<sub>2.5</sub> shall be controlled from each engine using good combustion practices and the burning of landfill gas in each engine.
4. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8 (g) for Sulfur Dioxide:
  - Sulfur Dioxide shall be controlled from each engine using good combustion practices and the burning of landfill gas in each engine.
5. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8 (g) for Volatile Organic Compounds:
  - Volatile Organic Compounds shall be controlled from each engine using good combustion practices and the burning of landfill gas in each engine.
6. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8 (g) for Mercury:
  - Mercury shall be controlled from each engine using good combustion practices and the burning of landfill gas in each engine.
7. In order to comply with the best available control technology (BACT) determination pursuant to GS 62.133.8 (g) for Lead:
  - Lead shall be controlled from each engine using good combustion practices and the burning of landfill gas in each engine.



- B. Annual testing for NO<sub>x</sub> and CO shall be performed using the test procedures and results (g/hp-hr) in accordance with 40 CFR 1065.10 and shall be used to demonstrate compliance with the State BACT limits listed above in this Section.
1. The Permittee shall arrange for air emission testing protocols to be provided to the DAQ prior to testing. Testing protocols are not required to be pre-approved by the DAQ prior to testing. The DAQ shall review testing protocols for pre-approval prior to testing if requested by the Permittee at least 45 days before conducting the test.
  2. To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall PROVIDE the Regional Office, in WRITING, at least a 15 day notice of any required performance test(s).
  3. Two copies of the test results must be submitted to the Regional Supervisor, DAQ, in accordance with the approved procedures of the Environmental Management Commission within 30 days after the completion of the source test.
  4. The source shall be responsible for ensuring, within the limits of practicality, that the equipment or process being tested is operated at or near its maximum normal production rate, or at a lesser rate if specified by the Director or his delegate.
- C. The Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
1. The Permittee shall perform an annual inspection (for each 12 month period following the initial inspection) to ensure the engine is operating properly.
  2. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
    - a. The date and time of each recorded action;
    - b. The results of each inspection;
    - c. The results of any maintenance performed on the engine;
    - d. Any variance from manufacturer's recommendations, if any, and the corrections made.

**Reporting Requirements [15A NCAC 2Q .0508(f)]**

- D. The Permittee shall maintain a monthly summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping listed above and shall submit the results within 30 days of a written request by the DAQ.

**XIV. Public Notice:**

A thirty-day public notice and forty-five day EPA review period is required.

The 30 day public notice period was from March 17, 2015 through April 15, 2015. There were no adverse public comments received for this permit application.

The DAQ sent copies of the appropriate information to the USEPA on March 16, 2015. The EPA 45-day review period was from March 17, 2015 through May 1, 2015. The USEPA did not have any adverse comments on the 1<sup>st</sup> Time Title V permit for this facility.

Prior to the issuance of this 1<sup>st</sup> Time Title V permit, a State 300 permit (Revision R01) was issued to allow the construction of eighteen additional engine/generator units at this facility. These units have been incorporated into the 1<sup>st</sup> Time Title V permit with the stipulation that the Permittee shall file another application within twelve months of operation of the units in accordance with 15A NCAC 2Q .0504. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

- XV. Non Attainment:  
Wake County is currently designated as attainment for the eight-hour ozone standard.
- XVI. Prevention of Significant Deterioration:  
The 1<sup>st</sup> Time Title V air permit includes two PSD Avoidance conditions for NO<sub>x</sub> and CO. The other Criteria pollutants are below the PSD major source thresholds. This facility is now considered a major source for PSD. The next modification at this facility will be compared against the PSD significance levels for respective criteria pollutants.
- XVII. Greenhouse gases:  
Greenhouse gas emissions from the thirty-six engine/generator units are greater than the 100,000 tons CO<sub>2e</sub> per year.
- XVIII. This facility is not subject to 15A NCAC 2Q .0508(g) "Prevention of Accidental Releases" because it does not store chemicals that are subject to this regulation.
- XIX. Recommendations:  
This 1<sup>st</sup> Time Title V has been reviewed by the DAQ to determine compliance with all procedures and requirements. The Raleigh Regional Office made comments on the draft permit. The DAQ has determined that this facility is complying or will achieve compliance as specified in the permit with all applicable requirements. The Raleigh Regional Office concurs.

Issue permit No. 10198T02.